REMARKS

Overview

Claims 82-92 currently stand allowed.

The Examiner also responded in the prior Office Action as follows: rejected claims 62-71, 76-81, 93-121, 123-125, 127-145 and 147 under 35 U.S.C. 102(a) as being anticipated by John Bates, et al., "Middleware Support for Mobile Multimedia Applications," (1997); and rejected claims 122, 126 and 146 under 35 U.S.C. 103(a) as being unpatentable over Bates in view of Schmidt, et al., "There is more to context than location," (November 1998).

Applicants hereby amend claims 62, 70, 71, 76, 80, 81, 93, 130, 133, 136 and 137 in order to clarify the subject matter of their invention, and further hereby add new claims 148-207. Thus, claims 62-71 and 76-207 are now pending.

Analysis

Applicants would like to thank Examiner Hailu for his indication of the allowable subject matter of claims 82-92. Applicants note that new claims 157-197 each depend from independent method claim 82, and thus are allowable for at least the same reasons as claim 82. Similarly, new independent computer-readable medium claim 198 and new independent computing device claim 199 each recite language similar to that of independent method claim 82, and Applicants believe that claims 198 and 199 are thus also allowable for at least the same reasons as claim 82.

The Examiner has rejected each of the other previously pending claims 62-71, 76-81 and 93-147 as being unpatentable over Bates, either alone or in combination with Schmidt. However, each of the pending claims as rejected includes features and provides functionality not disclosed by these references, and thus are each allowable over these references.

Moreover, Applicants have amended each of the previously pending claims in order to clarify the subject matter of the invention, and these pending claims as amended continue to be patentable over the cited prior art references. For example, independent claims 62, 70 and 71 as amended each generally recites that as part of the event detection and notification process, multiple values are received for one of the

state attributes and a mediated value is generated for that state attribute as part of the process. Claim 62, for example, recites "monitoring information related to the at least one context attributes for an indication of an occurrence of the specified event, the monitoring including obtaining multiple values for one of the at least one context attributes and mediating the obtained multiple values to determine a mediated value for that one context attribute; and when the monitoring detects an indication of the occurrence of the specified event based at least in part on the mediated value, notifying the first client of the occurrence," and claims 70 and 71 recite similar language.

In contrast, neither Bates nor Schmidt appears to include any teaching or suggestion of mediating between multiple available values for a state attribute. Instead, the location service of Bates appears to receive and provide a single definitive location value at a time for an object of interest, and thus would have no need or ability to perform such mediation. Thus, for at least that reason, independent claims 62, 70 and 71 are patentable over the cited prior art references, as are the claims that depend from those claims.

With respect to independent claims 76, 80, 81, 93, 130, 133 and 136 as amended, each of these claims generally recites that multiple types of information is used as part of the event request, detection and notification process, and in particular that in addition to using values of state attributes, additional information that describes the values is used as part of the process. Some claims further recite that the additional information is metadata or meta-information about the state attribute values, such as information about state attribute value uncertainty, and information about when state attribute values are accurate. For example, claim 93 as amended recites "receiving information from one or more modules that includes one or more values of the at least one state attributes and additional information for the one or more values that describes those values; [and] after the receiving of the request, detecting an occurrence of the specified type based at least in part on the received information;" and claim 76 as amended recites "determining that an occurrence of the event is of interest if criteria related to the event are satisfied by the occurrence, the criteria based at least in part on one or more values of the at least state attributes and on additional information for each of the one or more values that describes that value". The other independent claims 80,

81, 130, 133 and 136 each recite similar language, and other claims such as new dependent claims 151-156 provide additional details about the additional information.

In contrast, neither Bates nor Schmidt appears to include any teaching or suggestion of using additional information about attribute values, such as metadata, as part of the notification process. Instead, the location service of Bates appears to lack any idea of using such metadata or other additional information for any purpose. Thus, for at least that reason, independent claims 76, 80, 81, 93, 130, 133 and 136 are patentable over the cited prior art references, as are the claims that depend from those claims.

With respect to independent claim 137 as amended, the claim recites generally that received values for state attributes are used to generate modeled values for other state attributes at higher levels of abstraction, and these modeled values for the abstract state attributes are used as part of the notification process. For example, claim 137 as amended recited "generating one or more modeled values for one or more state attributes at a higher level of abstraction than the specified state attributes, the generated modeled values based at least in part on the received values of the specified state attributes; [and] after the receiving of the indication of the condition, detecting satisfaction of the indicated condition based at least in part on the generated modeled values of the state attributes at the higher level of abstraction". Other new dependent claims 148-150 provide additional details related to the abstract state attributes.

In contrast, neither Bates nor Schmidt appears to include any teaching or suggestion of generating modeled values for abstract state attributes using received values for other state attributes for any purpose, and in particular not for using that information as part of the notification process. Instead, the location service of Bates appears to merely receive and provide information about location values. Thus, for at least that reason, independent claim 137 is patentable over the cited prior art references, as are the claims that depend from claim 137.

In addition, each of the new independent claims 200, 203 and 206 recite additional inventive aspects that are not taught or suggested by any of the cited prior art references. For example, claim 200 generally recites that stored values for state attributes are checked as to their relevance to an event occurrence, and when they do

not reflect an occurrence of a specified event, additional values for state attributes are obtained from one or more servers and used to determine whether the specified event has occurred. Claim 203 generally recites that new state attributes may dynamically become available after notification requests are received, and if so may be used to satisfy notification requests. Claim 206 generally recites that access control is used to limit whether a client is allowed to receive event occurrence notifications based on attribute values.

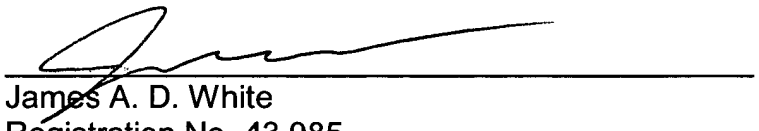
In contrast, neither Bates nor Schmidt appears to include any teaching or suggestion of any of these inventive aspects. With respect to caching attribute values and then obtaining additional values when the cached values are not sufficiently relevant, neither Bates not Schmidt appears to include any related teachings. With respect to using attributes whose availability can dynamically change, neither Bates not Schmidt appears to include any related teachings, and more generally Bates appears to discuss only information related to location that is always available. With respect to using access control to limit whether a client is allowed to receive event occurrence notifications based on attribute values, neither Bates not Schmidt appears to include any related teachings. Thus, for at least that reason, independent claims 200, 203 and 206 are patentable over the cited prior art references, as are the claims that depend from those claims.

Furthermore, the pending dependent claims also recite additional features lacking in the cited references, and are thus allowable on the basis of those features as well, although these additional features are not enumerated here for the sake of brevity.

Conclusion

In light of the above remarks, Applicants respectfully submit that all of the pending claims are allowable. Applicants therefore respectfully request the Examiner to reconsider this application and timely allow all pending claims. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 694-4815.

Respectfully submitted,
Seed IP Law Group PLLC



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Enclosures:
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